

A new species of *Brachylepis* Kolbe, 1894 from Tanzania (Scarabaeidae: Melolonthinae: Leucopholini)

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The Afrotropical genus *Brachylepis* Kolbe, 1894 (Scarabaeidae: Melolonthinae: Leucopholini) was established for *Coniopholis elephas* Gerstaecker, 1867 from Kenya. Subsequently, Brenske (1898) described *Brachylepis bennigseni* from Tanzania (Pare Mountains), and Lacroix (2009) described *B. werneri* from Ethiopia (Negele Borana) and synonymised *B. bennigseni* with *B. elephas*. Thus, the genus contains only two species. From the closely related Afrotropical leucopholine genera (e.g., *Eulepida* Kolbe, 1894, *Eulepidopsis* Burgeon, 1946, *Cochliotis* Kolbe, 1894) it differs in having nine antennomeres, the terminal maxillary palpomere expanded near midlength, and an incomplete metatibial carina (Lacroix 2009, 2010).

Specimens were examined with a Novex stereomicroscope and measurements were taken with an ocular grid. Length measurements are from the anterior margin of the clypeus to apices of the elytra. Habitus photographs were taken with a Canon MP-E 65mm/2.8 1–5x macro lens on bellows attached to a Canon EOS 550D camera. Partially focussed images of each specimen were stacked using the Helicon Focus 3.20.2 Pro software. Specimens in the type series are provided with one red printed label: “*Brachylepis turmensis* sp. n., HOLOTYPE, Richard Sehnal, 2017”. Exact label data are cited for the type material examined. Separate labels are indicated by double vertical lines [||], text lines of each label are separated by a single vertical line [|]. Information in quotes indicates the original spelling. My remarks are in brackets.

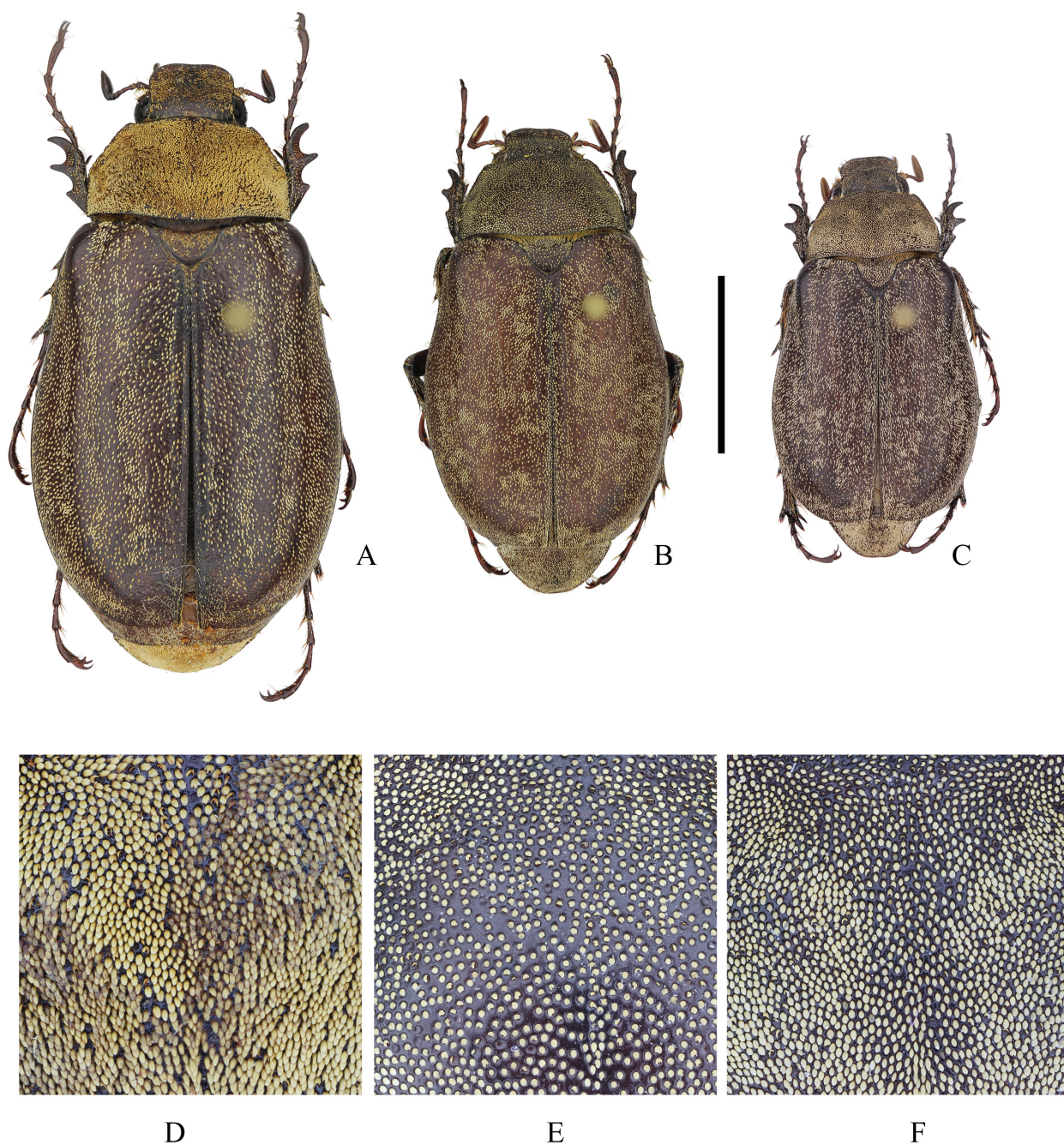
Brachylepis turmensis Sehnal, new species (Figs. 1C, 1F, 2G–H, 3C, 3F, 3I, 4C)

Type locality. Ethiopia, Southern Nations, Nationalities, and Peoples’ Region, Turmi.

Type material. Holotype: “ETHIOPIA—Hamer or. Turmi near 950 m. | 04°58’31”N 036°30’53”E | 9.-11.4.2016 | Vladimír Major leg. [printed] || RSCV | Richard SEHNAL | collection | Velenice | Czech Republic [printed]”. Holotype is deposited in Národní muzeum Praha, Czech Republic.

Description of holotype. Body length 24.5 mm (without pygidium). Body elongate, posteriorly slightly dilated. Dorsal surface and abdomen dark brown, legs partly lighter, antenna bicolorous, elytra pruinose (Fig. 1C). Clypeus 2.8x wider than long, with anterior angles broadly rounded and anterior margin strongly upturned and bisinuate; surface deeply and densely punctate, with smooth facets between punctures; posterolaterally oriented, pointed, semierect scale originating from centre of each puncture; some medial scales narrower than others, frontoclypeal suture weakly indicated. Frons deeply and densely punctate, with a scale originating from each puncture; scales near midline point laterally toward a longitudinal bulge in each half of frons, forming a bisinuate pattern (Fig. 1C). Labrum bilobed, anterior angles obtuse but distinct, macrosetae longest at edge of clypeus and around eye canthus. Eye canthus long, with macrosetae in two orderly rows; anterior conical setae short, posterior conical setae 2x shorter than clypeal scales. Antenna bicolorous, with nine antennomeres; antennal shaft reddish brown, antennal club yellow. Club with three antennomeres, straight, same length as antennal shaft (antennomeres 1–4 combined), apex of club with irregular, fine, short macrosetae with sensilla pits (Fig. 3I). Terminal maxillary palpomere widest at midlength, apically truncate, with a terminal tubercle on inner, more angular side, and dorsally with a large oval alutaceous area widening toward apex.

Pronotum weakly convex, approximately octagonal (Fig. 1C), 2x wider than long, widest in posterior third. Lateral margins crenulate, with a pale brown straight seta issuing from each crenulation. Surface deeply and densely punctate; spaces between them smooth and shiny; each puncture bearing a pointed scale. Scales forming groups oriented mostly toward midline (Fig. 1F).



FIGURES 1A–F. Habitus (A–C) and detail of setation on pronotum (D–F), dorsal view. A, D, *Brachylepis elephas*, male, Tanzania, Voi; B, E, *Brachylepis weneri*, male, Tanzania, Iringa; C, F, *Brachylepis turmensis* new species, holotype male. Scale bar = 1 cm (for habitus); scale bar = 2 mm (for detail of pronotum).

Scutellum wider than long, triangular, evenly punctate in anterior half, with scales similar to those on pronotum (Fig. 1C).

Elytra convex, elytron 1.25x longer than wide, without true striae and intervals, instead only indistinct broad, slightly elevated or lowered strips indicated by relative density of squamation, with oblique crests nearly glabrous. Part of elytron between terminal bulge and apex short, steeply inclined. Spaces between punctures and scales finely rugate and shiny. Lateral margins with short setae.

Macropterous. All femora shiny, irregularly punctate, with yellowish-white scales and reddish-brown long setae. Protibia tridentate; inner terminal spur at level of proximal tooth (Fig. 3F). Meso- and metatibiae expanded distally, densely covered by broad scales and long setae, with one curved spur apically and one oblique interrupted carina

externally (Fig. 3C). Distal edge with a row of short, stout setae of equal length, terminal calcars stout, long, lower calcar little shorter than upper; pro-, meso- and metatarsomeres without patches of short, dense setae; all tarsomeres ventrally covered by sparse setae. Claws bifid, with ventrobasal teeth.

Abdominal ventrites reddish brown, shiny, finely punctate, densely covered by oval white scales.

Pygidium slightly concave, shallowly punctate, with yellowish-white, caudally oriented scales becoming finer toward posterior margin.

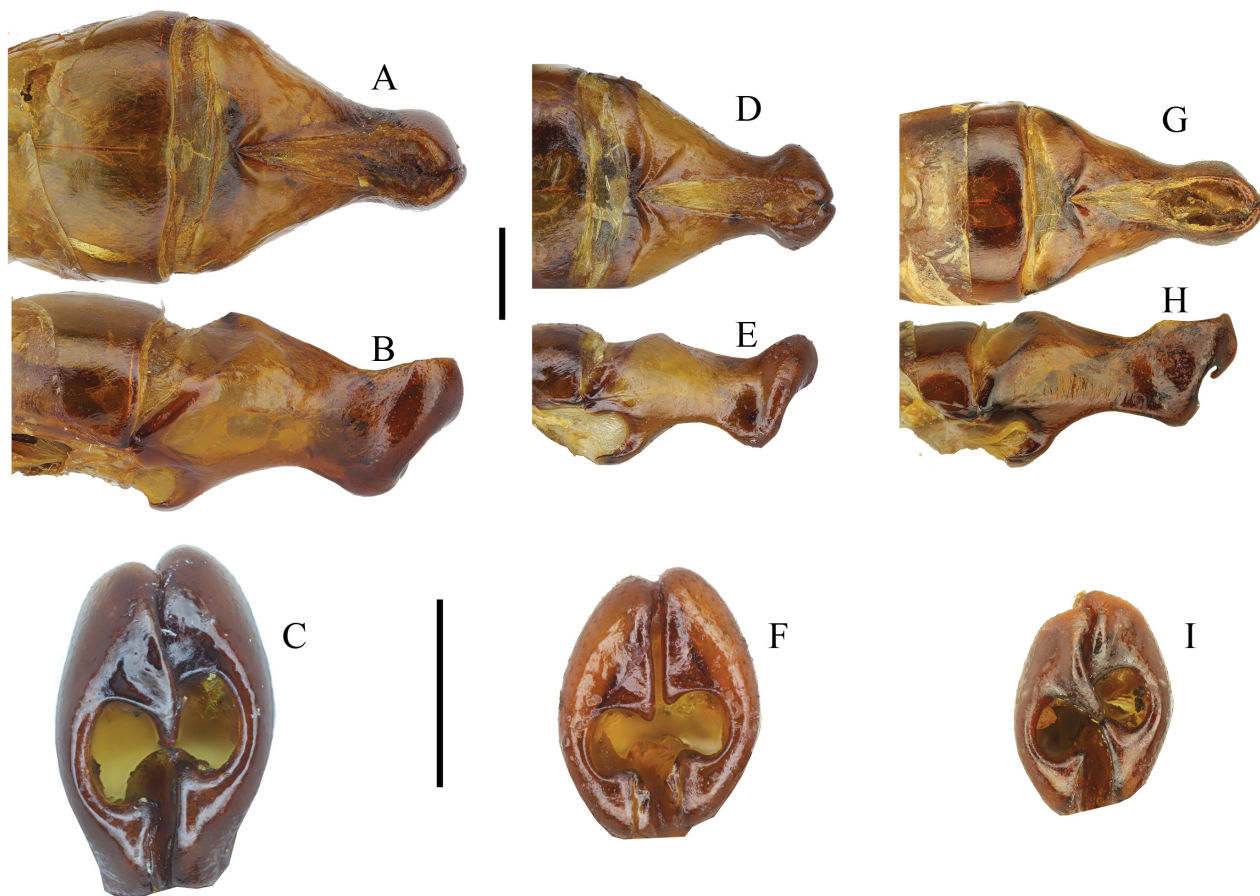
Male genitalia (Figs. 2G–I). Aedeagus symmetrical, conical in dorsal view. Phallobase in lateral view dorsally as well as ventrally doubly undulate, dorsally at apex terminating in a distinct hook. Each paramere with a double tooth, medially teeth meet and in frontoventral view form a horizontal number 8 (Fig. 2I).

Sexual dimorphism. Female unknown.

Geographic distribution. Ethiopia, Southern Nations, Nationalities and Peoples' Region, Turmi. The species is known only from the type locality.

Differential diagnosis. *Brachylepis turmensis* new species is the third representative of the genus *Brachylepis*. It can be distinguished from the previously described species by the following characters: length < 25.0 mm, pronotal scales oval, toward base weakly overlapping margins of punctures (Fig. 1F); antennal club yellow and shorter than reddish-brown antennal shaft; shape of the aedeagus (Fig. 3I).

Etymology. Derived from the name of the type locality, Turmi.

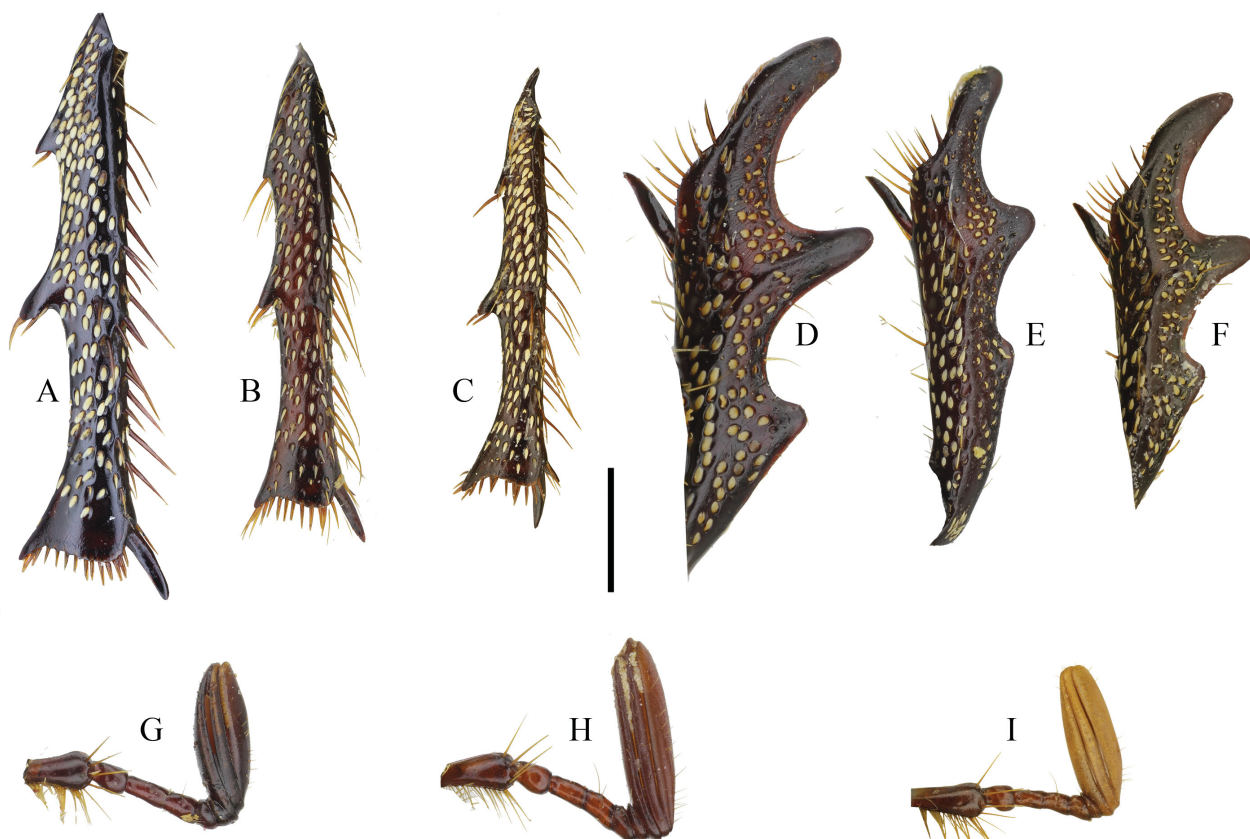


FIGURES 2A–I. Aedeagus in dorsal (A, D, G) and lateral (B, E, H) views; apex of aedeagus (C, F, I). A–C, *Brachylepis elephas*, Tanzania, Voi; D–F, *Brachylepis wernerii*, Tanzania, Iringa; G–I, *Brachylepis turmensis* new species, holotype. Scale bar = 1 mm.

Faunistic notes on other *Brachylepis* species

***Brachylepis elephas* (Gerstaecker, 1867) (Figs. 1A, 1D, 2A–C, 3A, 3D, 3G, 4A)**

Material studied. Kenya, Voi (Tsavo), 22.xi.–2.xii. 1996, M. Snižek, one male (33.4 mm) and one female (34.0 mm), deposited in Richard Sehnal collection, Velenice, Czech Republic.



FIGURES 3A–I. Mesotibia (A–C), ventral view; protibia (D–F), dorsal view; antenna (G–I), dorsal view. A, D, G, *Brachylepis elephas*, male, Tanzania, Voi; B, E, H, *Brachylepis weneri*, male, Tanzania, Iringa; C, F, I, *Brachylepis turmensis* new species, holotype male. Scale bar = 1 mm.

Note. This species was described from Kenya (Endara) and subsequently recorded also from Democratic Republic of the Congo (Mahagi), Tanzania (Pare Mountains, Ruwuma near Songea), and Kenya (Ikutha, Mount Elgon, Sagala Hills, Kibwezi, Mtito Andei, Voi) (Lacroix 2013). The studied specimens represent additional material from Voi. Detailed photographs of the species are presented for the first time.

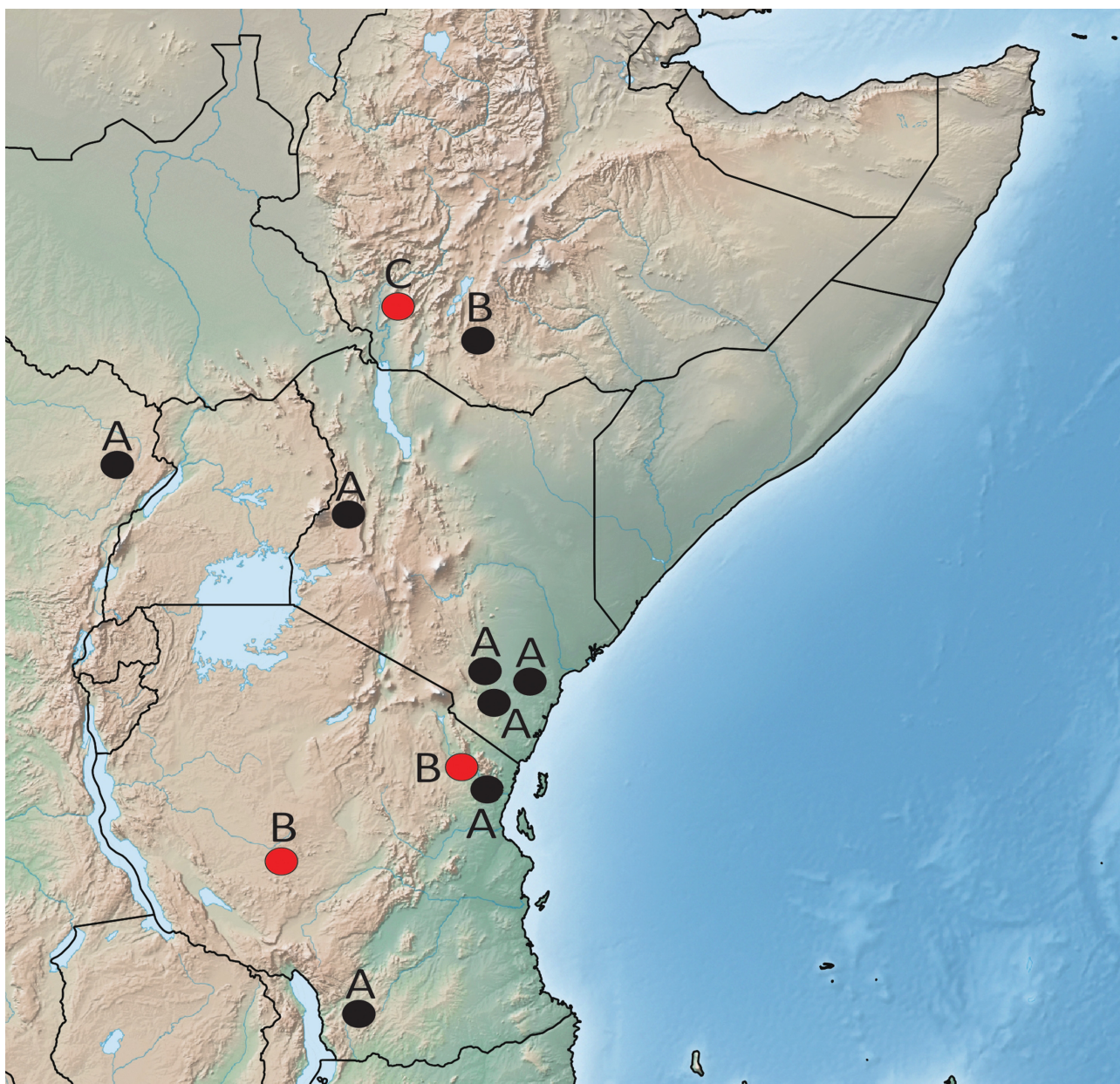
***Brachylepis weneri* Lacroix, 2009 (Figs. 1B, 1E, 2D–F, 3B, 3E, 3H, 4B)**

Material studied. Tanzania, Handeni, 14.iii. 2002, M. Snížek, one female (31.8 mm), deposited in Richard Sehnal collection, Velenice, Czech Republic. Tanzania, Iringa, SE Rusha National Park, 13–17.xii. 2014, M. Bednařík, one male (27.1 mm), deposited in Richard Sehnal collection, Velenice, Czech Republic.

Note. Previously, this species was known only from the type series collected in Ethiopia (Sidamo). The above mentioned specimens represent new distributional records for Tanzania. Detailed photographs of the species are presented for the first time.

Key to species of *Brachylepis*

1. Entire pronotum densely covered by imbricating, semirecumbent, pointed scales; epicuticle not visible. Scales at least 2x longer than puncture diameters. Antennal shaft and club blackish brown *B. elephas* (Gerstaecker, 1867)
- Pronotal scales no longer than 1.1x puncture diameters, do not cover entire surface, colour and punctuation of cuticle visible 2
2. Pronotal scales oval, toward base weakly overlap margins of punctures. Antennal shaft reddish brown, antennal club yellow *B. turmensis* Sehnal, new species
- Pronotal scales spherical, fill punctures and do not overlap their margins. Antennal shaft and club reddish brown *B. weneri* Lacroix, 2009



FIGURES 4A–C. Map of currently known geographical distributions. A, *Brachylepis elephas*; B, *Brachylepis werner*; C, *Brachylepis turmensis* new species. Red dots indicate new species or new locality.

Acknowledgements

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References cited

- Lacroix, M. (2009) Révision du genre *Brachylepis* Kolbe (Coleoptera, Melolonthidae, Leucopholini). *Coléoptères*, 15, 153–168.
 Lacroix, M. (2010) *Melolonthinae afrotropicaux (Scarabaeoidea, Melolonthidae). Genera et catalogue commenté*. Editions Marc Lacroix, Paris, 277 pp., 192 pls.